

# Environmental Genomics (En-Gen)

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## Program Solicitation NSF 06-611



**National Science Foundation**

Directorate for Biological Sciences  
Emerging Frontiers

Directorate for Geosciences

Office of Polar Programs

**Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):

January 29, 2007

By 5 PM local time of submitting institution

## REVISION NOTES

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In furtherance of the President's Management Agenda, NSF has identified programs that will offer proposers the option to utilize Grants.gov to prepare and submit proposals, or will require that proposers utilize Grants.gov to prepare and submit proposals. Grants.gov provides a single Government-wide portal for finding and applying for Federal grants online.

In response to this program solicitation, proposers may opt to submit proposals via [Grants.gov](http://Grants.gov) or via the [NSF FastLane](#) system.

## SUMMARY OF PROGRAM REQUIREMENTS

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### General Information

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**Program Title:**

Environmental Genomics (En-Gen)

**Synopsis of Program:**

Genomics-enabled methods are beginning to be used to increase our understanding of how organisms of all types—plants, animals, and microbes--interact with their environments. The Environmental Genomics Program is intended to enhance the development of fundamental knowledge and strengthen the capacity to apply these methods in research on organisms in their natural environments. Research foci should be appropriate to the themes of interest or purviews of the Directorates for Biological Sciences (BIO) and Geosciences (GEO). If related to polar species or polar ecosystems, proposals should be responsive to the themes and goals of the International Polar Year (IPY), and submitted to the NSF IPY solicitation [<http://www>.

**Cognizant Program Officer(s):**

- Enriqueta Barrera, Program Director, 785 S, telephone: (703) 292-8551, fax: (703) 292-9225, email: [engen@nsf.gov](mailto:engen@nsf.gov)
- Marie Bundy, International Polar Year Program Manager, 755 S, telephone: (703) 292-7418, fax: (703) 292-9079, email: [engen@nsf.gov](mailto:engen@nsf.gov)
- Matthew Kane, Program Director, 655 S, telephone: (703) 292-7186, fax: (703) 292-9061, email: [engen@nsf.gov](mailto:engen@nsf.gov)
- Paul Kemp, Associate Program Director, 725 N, telephone: (703) 292-8582, fax: (703) 292-9085, email: [engen@nsf.gov](mailto:engen@nsf.gov)
- Phillip Taylor, Program Director, 725 N, telephone: (703) 292-8582, fax: (703) 292-9085, email: [engen@nsf.gov](mailto:engen@nsf.gov)
- William Zamer, Program Director, 685 S, telephone: (703) 292-8420, fax: (703) 292-9153, email: [engen@nsf.gov](mailto:engen@nsf.gov)

**Applicable Catalog of Federal Domestic Assistance (CFDA) Number(s):**

- 47.050 --- Geosciences
- 47.074 --- Biological Sciences
- 47.078 --- Office of Polar Programs

## Award Information

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**Anticipated Type of Award:** Standard Grant

**Estimated Number of Awards:** 15

**Anticipated Funding Amount:** \$11,600,000 Estimated program budget, number of awards and average award size/duration are subject to the availability of funds. Fifteen awards are anticipated as standard awards from the anticipated \$11.6M available to the program. Each award may range up to \$1M total, for durations up to 3 years maximum. Larger award sizes may be considered for those projects that have been identified by reviewers to be exceptionally worthy of a larger investment.

## Eligibility Information

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**Organization Limit:**

Proposals may only be submitted by the following:

- Proposals may only be submitted by U.S. academic institutions, U.S. non-profit research organizations including museums, research laboratories, professional societies and similar organizations in the U.S. that are directly associated with educational or research activities, and consortia of only the eligible organizations listed here. When a consortium of eligible organizations submits a proposal, it must be submitted as a single proposal with one organization serving as the lead and all other organizations as subawardees. Separately submitted collaborative proposals will not be accepted and will be returned without review. Organizations ineligible to submit to this program solicitation may not receive subawards.

**PI Limit:**

None Specified

**Limit on Number of Proposals per Organization:**

None Specified

**Limit on Number of Proposals per PI:**

None Specified

## Proposal Preparation and Submission Instructions

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### A. Proposal Preparation Instructions

- **Letters of Intent:** Not Applicable
- **Full Proposals:**
  - Full Proposals submitted via FastLane: Grant Proposal Guide (GPG) Guidelines apply. The complete text of the GPG is available electronically on the NSF website at: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg).
  - Full Proposals submitted via Grants.gov: NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov Guidelines apply (Note: The NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: <http://www.nsf.gov/bfa/dias/policy/docs/grantsgovguide.pdf>)

### B. Budgetary Information

- **Cost Sharing Requirements:** Cost Sharing is not required by NSF.
- **Indirect Cost (F&A) Limitations:** Not Applicable
- **Other Budgetary Limitations:** Not Applicable

### C. Due Dates

- **Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):

January 29, 2007

By 5 PM local time of submitting institution

## Proposal Review Information Criteria

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**Merit Review Criteria:** National Science Board approved criteria apply.

## Award Administration Information

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**Award Conditions:** Standard NSF award conditions apply

**Reporting Requirements:** Standard NSF reporting requirements apply

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## I. INTRODUCTION

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The Environmental Genomics Program invites the submission of proposals in which investigators plan to use genomic information and tools to further our understanding of how organisms of all types—plants, animals, and microbes—interact with their environments. Although genomics-enabled methods are beginning to be utilized to address questions in this area, the Environmental Genomics Program is intended to enhance the development of fundamental knowledge and strengthen the capacity to apply these methods in research on organisms in their natural environments.

### **Environmental Genomics related to Polar Species and Ecosystems:**

Those who wish to undertake environmental genomics studies that contribute to fundamental knowledge about organism-environment interactions in polar regions *should submit their proposals to the NSF FY 2007 International Polar Year (IPY) solicitation* [[http://www.nsf.gov/od/opp/ipy/ipy\\_prog\\_opps.jsp](http://www.nsf.gov/od/opp/ipy/ipy_prog_opps.jsp)] rather than this En-Gen solicitation.

The U.S. National Committee for IPY, formed under the auspices of the NAS, has published a vision document available at <http://www.us-ipy.org/>. Additional information is also available on the U.S. government IPY site ([www.us-ipy.gov](http://www.us-ipy.gov)), maintained by NSF. IPY is intended to be a milestone event in exploring new frontiers in polar research and improving our understanding of the critical role of polar regions in global processes. The unique biology of the polar regions, coupled with the extreme environmental settings at the poles, offer novel natural laboratories where genomics approaches and genomic tools can contribute significantly to our understanding of how organisms interact with their biotic and abiotic environments.

## II. PROGRAM DESCRIPTION

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Organisms possess powerful but limited capabilities to respond to changing environmental conditions. We have some understanding of phenotypic responses to environmental conditions and the control mechanisms associated with relevant, specific genes. A more integrated understanding of the complexity of phenotypic and genetic responses will be gained from research that addresses these issues on a genome-wide scale, but relatively few studies at this scale have been conducted. Fewer still have attempted to use genomic approaches to understand an organism's impact on its environment. Additionally, while populations and species possess an even greater collective diversity of responses than do individuals, applying genomic approaches to understand processes occurring at population through ecosystem scales remains a major challenge. Genomic approaches that connect these scales of analysis offer the opportunity to gain novel insights into environmental

issues and ecological responses to environmental change.

Proposals may address any of a wide range of questions about organisms and their environments in a variety of sub-fields, including ecology, evolutionary biology, physiological ecology, microbial ecology, biogeochemistry, and biogeology. Genomic approaches and methodologies must be applied in a logical and necessary manner to address these questions. Hypothesis-based research projects are welcome as are discovery-based projects that focus on compelling questions for which hypothesis-based research is not possible or practical. The Environmental Genomics Program encourages proposals that include substantial training activities that will serve to increase the numbers of investigators prepared to take advantage of genomic approaches.

Research foci should be appropriate to the themes of interest or purviews of the Directorates for Biological Sciences (BIO) and Geosciences (GEO). If related to polar biology, proposals should be responsive to the themes and goals of the IPY, and be submitted to the NSF FY 2007 IPY solicitation [[http://www.nsf.gov/od/opp/ipy/ipy\\_prog\\_opps.jsp](http://www.nsf.gov/od/opp/ipy/ipy_prog_opps.jsp)].

Examples of projects that would be appropriate for the Environmental Genomics competition include, but are not limited to:

- Application of genomic approaches to quantify and model gene expression and control mechanisms in response to abiotic and biotic factors (e.g., temperature, pressure, desiccation, light, nutrients, hosts and symbionts, quorum sensing, cell differentiation, starvation/survival, apoptosis, or viral infection), or in response to predicted scenarios of environmental change.
- Examination of variance in gene expression within and among populations and/or species that experience different ranges or extremes in environmental conditions, as a means to test hypotheses about the evolution of the capacity to acclimate to environmental change.
- Use of genomic tools to address fundamental questions about how the environment interacts with genomes to produce a range of phenotypes.

Proposals submitted to En-Gen should address scientific topics that are consistent with those areas of environmental research supported by the Directorates for Biological and Geological Sciences. Proposals that primarily seek support for sequencing, studying systematic relationships, using standard genetic techniques for taxonomic identification (e.g., 16s RNA), or that involve only a limited number of genes should be directed to other programs. Investigators who are interested in holding workshops on topics related to environmental genomics, or who wish to conduct training in genomic approaches as a means to build capacity in these methods should discuss their ideas with a member of the En-Gen working group, or a program director in a relevant core program. Requests for support for work on environmental problems that fall within the mission of other federal agencies are also unlikely to be competitive in this program.

### III. AWARD INFORMATION

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**Anticipated Type of Award:** Standard Grant

**Estimated Number of Awards:** 15

**Anticipated Funding Amount:** \$11,600,000 Estimated program budget, number of awards and average award size/duration are subject to the availability of funds. Fifteen awards are anticipated as standard awards from the anticipated \$11.6M available to the program. Each award may range up to \$1M total, for durations up to 3 years maximum. Larger award sizes may be considered for those projects that have been identified by reviewers to be exceptionally worthy of a larger investment.

### IV. ELIGIBILITY INFORMATION

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**Organization Limit:**

Proposals may only be submitted by the following:

- Proposals may only be submitted by U.S. academic institutions, U.S. non-profit research organizations including museums, research laboratories, professional societies and similar organizations in the U.S. that are directly associated with educational or research activities, and consortia of only the eligible organizations listed here. When a consortium of eligible organizations

submits a proposal, it must be submitted as a single proposal with one organization serving as the lead and all other organizations as subawardees. Separately submitted collaborative proposals will not be accepted and will be returned without review. Organizations ineligible to submit to this program solicitation may not receive subawards.

**PI Limit:**

None Specified

**Limit on Number of Proposals per Organization:**

None Specified

**Limit on Number of Proposals per PI:**

None Specified

**Additional Eligibility Info:**

## **V. PROPOSAL PREPARATION AND SUBMISSION INSTRUCTIONS**

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### **A. Proposal Preparation Instructions**

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**Full Proposal Preparation Instructions:** Proposers may opt to submit proposals in response to this Program Solicitation via Grants.gov or via the NSF FastLane system.

- Full proposals submitted via FastLane: Proposals submitted in response to this program solicitation should be prepared and submitted in accordance with the general guidelines contained in the NSF Grant Proposal Guide (GPG). The complete text of the GPG is available electronically on the NSF website at: [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpg](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpg). Paper copies of the GPG may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from [pubs@nsf.gov](mailto:pubs@nsf.gov). Proposers are reminded to identify this program solicitation number in the program solicitation block on the NSF Cover Sheet For Proposal to the National Science Foundation. Compliance with this requirement is critical to determining the relevant proposal processing guidelines. Failure to submit this information may delay processing.
- Full proposals submitted via Grants.gov: Proposals submitted in response to this program solicitation via Grants.gov should be prepared and submitted in accordance with the NSF Grants.gov Application Guide: A Guide for the Preparation and Submission of NSF Applications via Grants.gov. The complete text of the NSF Grants.gov Application Guide is available on the Grants.gov website and on the NSF website at: (<http://www.nsf.gov/bfa/dias/policy/docs/grantsgovguide.pdf>). To obtain copies of the Application Guide and Application Forms Package, click on the Apply tab on the Grants.gov site, then click on the Apply Step 1: Download a Grant Application Package and Application Instructions link and enter the funding opportunity number, (the program solicitation number without the NSF prefix) and press the Download Package button. Paper copies of the Grants.gov Application Guide also may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from [pubs@nsf.gov](mailto:pubs@nsf.gov).

The following additions to guidelines in the *Grant Proposal Guide* or *NSF Grants.gov Application Guide* apply to full proposals submitted to this solicitation:

**Coverpage:**

- The prefix "En-Gen:" must be included in the titles of proposals submitted to this solicitation.

**Project Description:**

- For projects requiring the use of ship or submersible facilities as part of the University-National Oceanographic Laboratories System (UNOLS), PIs should develop project plans involving use of these facilities in the 2008-2010

time frame only.

## Special Information and Supplementary Documentation

- In this section, include a data management plan (maximum 1 page), the contents of which should include: the types of data to be produced, the standards that would be applied for data format and metadata content, data access policies and provision, and means of sharing data with the scientific community (e.g., publications, websites, data bases and sequence information). For Grants.gov users, supplementary documents should be attached in Field 11 of the R&R Other Project Information Form.

### Additional Information:

- In addition to the formal submission of the proposal, the principal investigator must submit a listing of conflicts of interest information in a spreadsheet (MS Excel format preferred). The spreadsheet must be submitted as an email attachment to [ENGEN@NSF.GOV](mailto:ENGEN@NSF.GOV) by 5:00 PM Eastern time on January 30, 2007. The spreadsheet must contain a single alphabetized (by last name) list with the full names and institutional affiliations of all people with conflicts of interest for all senior personnel (PI and co-PIs), and any named personnel whose salary is requested in the proposed budget. Conflicts of interest to be identified are PhD thesis advisors or advisees, collaborators or co-authors, including postdocs, for the past 48 months, and any other individuals or institutions with which the investigator has financial ties (please specify type for each listing).

## B. Budgetary Information

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**Cost Sharing:** Cost sharing is not required by NSF in proposals submitted to the National Science Foundation.

### Budget Preparation Instructions:

Proposed activities involving multiple organizations should be submitted as one proposal from a single organization. Funds may be distributed among partner institutions via subawards from the submitting organization. Budgets on the standard NSF or Grants.gov budget forms must be submitted for each subawardee. Collaborative proposals (i.e., multiple proposals from different organizations submitted for a single project) are not permitted and shall be returned without review.

Proposed activities requiring ship or submersible facilities as part of the University-National Oceanographic Laboratories System (UNOLS) should be planned within the 2008-2010 time frame, and budgets should be prepared accordingly.

PIs of the En-Gen awards will be asked to attend a meeting to be held either at the National Science Foundation or an alternate location within two years of award start dates. Include the necessary travel costs for PIs to attend the meeting in the proposed budget. At the discretion of the PIs, proposed budgets may include travel costs necessary for co-PIs to attend the meeting.

## C. Due Dates

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- **Full Proposal Deadline(s)** (due by 5 p.m. proposer's local time):

January 29, 2007

By 5 PM local time of submitting institution

## D. FastLane/Grants.gov Requirements

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- **For Proposals Submitted Via FastLane:**

Detailed technical instructions regarding the technical aspects of preparation and submission via FastLane are available at: <https://www.fastlane.nsf.gov/a1/newstan.htm>. For FastLane user support, call the FastLane Help Desk at 1-800-673-6188 or e-mail [fastlane@nsf.gov](mailto:fastlane@nsf.gov). The FastLane Help Desk answers general technical questions related to the use of the FastLane system. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this funding opportunity.

**Submission of Electronically Signed Cover Sheets.** The Authorized Organizational Representative (AOR) must electronically sign the proposal Cover Sheet to submit the required proposal certifications (see Chapter II, Section C of the Grant Proposal Guide for a listing of the certifications). The AOR must provide the required electronic certifications within five working days following the electronic submission of the proposal. Further instructions regarding this process are available on the FastLane Website at: <https://www.fastlane.nsf.gov/fastlane.jsp>.

- **For Proposals Submitted Via Grants.gov:**

Before using Grants.gov for the first time, each organization must register to create an institutional profile. Once registered, the applicant's organization can then apply for any federal grant on the Grants.gov website. The Grants.gov's Grant Community User Guide is a comprehensive reference document that provides technical information about Grants.gov. Proposers can download the User Guide as a Microsoft Word document or as a PDF document. The Grants.gov User Guide is available at: <http://www.grants.gov/CustomerSupport>. In addition, the NSF Grants.gov Application Guide provides additional technical guidance regarding preparation of proposals via Grants.gov. For Grants.gov user support, contact the Grants.gov Contact Center at 1-800-518-4726 or by email: [support@grants.gov](mailto:support@grants.gov). The Grants.gov Contact Center answers general technical questions related to the use of Grants.gov. Specific questions related to this program solicitation should be referred to the NSF program staff contact(s) listed in Section VIII of this solicitation.

**Submitting the Proposal:** Once all documents have been completed, the Authorized Organizational Representative (AOR) must submit the application to Grants.gov and verify the desired funding opportunity and agency to which the application is submitted. The AOR must then sign and submit the application to Grants.gov. The completed application will be transferred to the NSF FastLane system for further processing.

## **VI. NSF PROPOSAL PROCESSING AND REVIEW PROCEDURES**

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Proposals received by NSF are assigned to the appropriate NSF program and, if they meet NSF proposal preparation requirements, for review. All proposals are carefully reviewed by a scientist, engineer, or educator serving as an NSF Program Officer, and usually by three to ten other persons outside NSF who are experts in the particular fields represented by the proposal. These reviewers are selected by Program Officers charged with the oversight of the review process. Proposers are invited to suggest names of persons they believe are especially well qualified to review the proposal and/or persons they would prefer not review the proposal. These suggestions may serve as one source in the reviewer selection process at the Program Officer's discretion. Submission of such names, however, is optional. Care is taken to ensure that reviewers have no conflicts with the proposer.

### **A. NSF Merit Review Criteria**

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All NSF proposals are evaluated through use of the two National Science Board (NSB)-approved merit review criteria: intellectual merit and the broader impacts of the proposed effort. In some instances, however, NSF will employ additional criteria as required to highlight the specific objectives of certain programs and activities.

The two NSB-approved merit review criteria are listed below. The criteria include considerations that help define them. These considerations are suggestions and not all will apply to any given proposal. While proposers must address both merit review criteria, reviewers will be asked to address only those considerations that are relevant to the proposal being considered and for which the reviewer is qualified to make judgements.

#### **What is the intellectual merit of the proposed activity?**

How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields? How well qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of the prior work.) To what extent does the proposed activity suggest and explore creative and original concepts? How well conceived and organized is the proposed activity? Is there sufficient access to resources?

#### **What are the broader impacts of the proposed activity?**

How well does the activity advance discovery and understanding while promoting teaching, training, and learning? How well does the proposed activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic, etc.)? To what extent will it enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships? Will the results be



disseminated broadly to enhance scientific and technological understanding? What may be the benefits of the proposed activity to society?

NSF staff will give careful consideration to the following in making funding decisions:

#### ***Integration of Research and Education***

One of the principal strategies in support of NSF's goals is to foster integration of research and education through the programs, projects, and activities it supports at academic and research institutions. These institutions provide abundant opportunities where individuals may concurrently assume responsibilities as researchers, educators, and students and where all can engage in joint efforts that infuse education with the excitement of discovery and enrich research through the diversity of learning perspectives.

#### ***Integrating Diversity into NSF Programs, Projects, and Activities***

Broadening opportunities and enabling the participation of all citizens -- women and men, underrepresented minorities, and persons with disabilities -- is essential to the health and vitality of science and engineering. NSF is committed to this principle of diversity and deems it central to the programs, projects, and activities it considers and supports.

## **B. Review and Selection Process**

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Proposals submitted in response to this program solicitation will be reviewed by Adhoc Review or Panel Review.

Reviewers will be asked to formulate a recommendation to either support or decline each proposal. The Program Officer assigned to manage the proposal's review will consider the advice of reviewers and will formulate a recommendation.

After scientific, technical and programmatic review and consideration of appropriate factors, the NSF Program Officer recommends to the cognizant Division Director whether the proposal should be declined or recommended for award. NSF is striving to be able to tell applicants whether their proposals have been declined or recommended for funding within six months. The time interval begins on the date of receipt. The interval ends when the Division Director accepts the Program Officer's recommendation.

A summary rating and accompanying narrative will be completed and submitted by each reviewer. In all cases, reviews are treated as confidential documents. Verbatim copies of reviews, excluding the names of the reviewers, are sent to the Principal Investigator/Project Director by the Program Officer. In addition, the proposer will receive an explanation of the decision to award or decline funding.

In all cases, after programmatic approval has been obtained, the proposals recommended for funding will be forwarded to the Division of Grants and Agreements for review of business, financial, and policy implications and the processing and issuance of a grant or other agreement. Proposers are cautioned that only a Grants and Agreements Officer may make commitments, obligations or awards on behalf of NSF or authorize the expenditure of funds. No commitment on the part of NSF should be inferred from technical or budgetary discussions with a NSF Program Officer. A Principal Investigator or organization that makes financial or personnel commitments in the absence of a grant or cooperative agreement signed by the NSF Grants and Agreements Officer does so at their own risk.

## **VII. AWARD ADMINISTRATION INFORMATION**

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### **A. Notification of the Award**

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Notification of the award is made to *the submitting organization* by a Grants Officer in the Division of Grants and Agreements. Organizations whose proposals are declined will be advised as promptly as possible by the cognizant NSF Program administering the program. Verbatim copies of reviews, not including the identity of the reviewer, will be provided automatically to the Principal Investigator. (See Section VI.B. for additional information on the review process.)

### **B. Award Conditions**

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An NSF award consists of: (1) the award letter, which includes any special provisions applicable to the award and any numbered amendments thereto; (2) the budget, which indicates the amounts, by categories of expense, on which NSF has based its support (or otherwise communicates any specific approvals or disapprovals of proposed expenditures); (3) the

proposal referenced in the award letter; (4) the applicable award conditions, such as Grant General Conditions (GC-1); \* or Federal Demonstration Partnership (FDP) Terms and Conditions \* and (5) any announcement or other NSF issuance that may be incorporated by reference in the award letter. Cooperative agreements also are administered in accordance with NSF Cooperative Agreement Financial and Administrative Terms and Conditions (CA-FATC) and the applicable Programmatic Terms and Conditions. NSF awards are electronically signed by an NSF Grants and Agreements Officer and transmitted electronically to the organization via e-mail.

\*These documents may be accessed electronically on NSF's Website at [http://www.nsf.gov/awards/managing/general\\_conditions.jsp?org=NSF](http://www.nsf.gov/awards/managing/general_conditions.jsp?org=NSF). Paper copies may be obtained from the NSF Publications Clearinghouse, telephone (703) 292-7827 or by e-mail from [pubs@nsf.gov](mailto:pubs@nsf.gov).

More comprehensive information on NSF Award Conditions and other important information on the administration of NSF awards is contained in the NSF *Grant Policy Manual* (GPM) Chapter II, available electronically on the NSF Website at [http://www.nsf.gov/publications/pub\\_summ.jsp?ods\\_key=gpm](http://www.nsf.gov/publications/pub_summ.jsp?ods_key=gpm).

## C. Reporting Requirements

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For all multi-year grants (including both standard and continuing grants), the Principal Investigator must submit an annual project report to the cognizant Program Officer at least 90 days before the end of the current budget period. (Some programs or awards require more frequent project reports). Within 90 days after expiration of a grant, the PI also is required to submit a final project report.

Failure to provide the required annual or final project reports will delay NSF review and processing of any future funding increments as well as any pending proposals for that PI. PIs should examine the formats of the required reports in advance to assure availability of required data.

PIs are required to use NSF's electronic project-reporting system, available through FastLane, for preparation and submission of annual and final project reports. Such reports provide information on activities and findings, project participants (individual and organizational) publications; and, other specific products and contributions. PIs will not be required to re-enter information previously provided, either with a proposal or in earlier updates using the electronic system. Submission of the report via FastLane constitutes certification by the PI that the contents of the report are accurate and complete.

## VIII. AGENCY CONTACTS

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General inquiries regarding this program should be made to:

- Enriqueta Barrera, Program Director, 785 S, telephone: (703) 292-8551, fax: (703) 292-9225, email: [engen@nsf.gov](mailto:engen@nsf.gov)
- Marie Bundy, International Polar Year Program Manager, 755 S, telephone: (703) 292-7418, fax: (703) 292-9079, email: [engen@nsf.gov](mailto:engen@nsf.gov)
- Matthew Kane, Program Director, 655 S, telephone: (703) 292-7186, fax: (703) 292-9061, email: [engen@nsf.gov](mailto:engen@nsf.gov)
- Paul Kemp, Associate Program Director, 725 N, telephone: (703) 292-8582, fax: (703) 292-9085, email: [engen@nsf.gov](mailto:engen@nsf.gov)
- Phillip Taylor, Program Director, 725 N, telephone: (703) 292-8582, fax: (703) 292-9085, email: [engen@nsf.gov](mailto:engen@nsf.gov)
- William Zamer, Program Director, 685 S, telephone: (703) 292-8420, fax: (703) 292-9153, email: [engen@nsf.gov](mailto:engen@nsf.gov)

For questions related to the use of FastLane, contact:

- FastLane Help Desk, telephone: 1-800-673-6188; e-mail: [fastlane@nsf.gov](mailto:fastlane@nsf.gov).

For questions relating to Grants.gov contact:

- Grants.gov Contact Center: If the Authorized Organizational Representatives (AOR) has not received a confirmation message from Grants.gov within 48 hours of submission of application, please contact via telephone: 1-800-518-4726; e-mail: [support@grants.gov](mailto:support@grants.gov).

## IX. OTHER INFORMATION

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The NSF Website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. Use of this Website by potential proposers is strongly encouraged. In addition, MyNSF (formerly the Custom News Service) is an information-delivery system designed to keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications, important changes in proposal and award policies and procedures, and upcoming NSF Regional Grants Conferences. Subscribers are informed through e-mail or the user's Web browser each time new publications are issued that match their identified interests. MyNSF also is available on NSF's Website at <http://www.nsf.gov/mynsf/>.

Grants.gov provides an additional electronic capability to search for Federal government-wide grant opportunities. NSF funding opportunities may be accessed via this new mechanism. Further information on Grants.gov may be obtained at <http://www.grants.gov>.

Information about the NSF FY 07 IPY solicitation may be found at [http://www.nsf.gov/od/opp/ipy/ipy\\_prog\\_opps.jsp](http://www.nsf.gov/od/opp/ipy/ipy_prog_opps.jsp).

## ABOUT THE NATIONAL SCIENCE FOUNDATION

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The National Science Foundation (NSF) is an independent Federal agency created by the National Science Foundation Act of 1950, as amended (42 USC 1861-75). The Act states the purpose of the NSF is "to promote the progress of science; [and] to advance the national health, prosperity, and welfare by supporting research and education in all fields of science and engineering."

NSF funds research and education in most fields of science and engineering. It does this through grants and cooperative agreements to more than 2,000 colleges, universities, K-12 school systems, businesses, informal science organizations and other research organizations throughout the US. The Foundation accounts for about one-fourth of Federal support to academic institutions for basic research.

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